

V. SIMPULAN DAN SARAN

A. Simpulan

Berdasarkan hasil penelitian prevalensi malaria unggas pada burung berkik ekor-lidi (*Gallinago stenura*) dengan teknik mikroskopis dapat disimpulkan:

1. Terdapat parasit *Plasmodium* sp. penyebab malaria burung pada sel darah merah burung Berkik Ekor-lidi.
2. Tidak ditemukan kenampakan parasit *Leucocytozoon* sp dan *Haemoproteus* sp. dalam darah burung Berkik Ekor-lidi.
3. Terdapat 3 sampel yang positif terinfeksi parasit penyebab malaria burung dari total 17 individu burung Berkik Ekor-lidi yang dianalisis dengan prevalensi 17,64 %.
4. Perbandingan burung yang terinfeksi malaria burung di pantai Trisik relatif lebih rendah prevalensinya dibandingkan dengan infeksi malaria unggas di Asia khususnya Myanmar, India dan Korea Selatan.

B. Saran

1. Perlu adanya penelitian lanjutan untuk menganalisis apakah interaksi infeksi malaria burung dapat terjadi antar jenis burung lokal dan migran.
2. Meneliti dan mengkaji faktor lain (vektor, gejala klinis, interaksi infeksi antara burung lokal dan migran) yang mendukung masih terjadinya infeksi parasit penyebab malaria burung.

3. Perlu adanya peningkatan kualitas alat pengamatan atau mikroskop untuk ukuran perbesaran dan teknologi pendukung agar meningkatkan kualitas hasil pengamatan.



V. DAFTAR PUSTAKA

- Ahumada, J. A., Lapointe, D. A. dan Samuel, M. D., 2004. Modeling the Population Dynamics of *Culex quinquefasciatus* (Diptera: *Culicidae*), Along an Elevational Gradient in Hawaii. *J. Med. Ent.* 41: 1157–1170.
- Anonim, 2005. *Avian Malaria*. USSG America. <http://www.nwhc.usgs.gov/hfs/Homepage.htm>. 14 Oktober 2009
- Anonim, 2009a. *Culex* sp. <http://www.dictionary.com/> 25 Agustus 2009
- Anonim, 2009b. *Berkisah Burung Pantai Yogyakarta di Australia*. <http://www.sbi-info.com/> 14 Desember 2009
- Atkinson, C.T. Woods, K.L. Dusek, R.J. Sileo, L.S dan W.M. Iko. 1995. Wildlife Disease and Conservation in Hawaii: Pathogenicity of Avian Malaria (*Plasmodium relictum*) in Experimentally Infected Iiwi (*Vestiaria coccinea*). *Parasitology* 111: S59–S69.
- Atkinson C. T., Dusek, R. J., Woods, K. L. dan Iko, W. M. 2000. Pathogenicity of Avian Malaria in Experimentally-Infected Hawaii Amakihi. *J. Wildl. Dis.* 36: 197-204.
- Atkinson, C.T., Dusek, R. J. dan Lease, J. K., 2001. Serological Responses and Immunity to Superinfection with Avian Malaria in Experimentally-Infected Hawaii Amakihi. *J. Wildl. Dis.* 37 (1): 20–27.
- Beadell, J. S., Gering, E., Austin, J., Dumbacher, J. P., Peirce, M. A., Pratt, T. K., Atkinson, C. T. dan Fleischer, R. C., 2004. Prevalence and Differential Host Specificity of Two Avian Blood Parasite Genera in the Australo-Papuan Region. *Mol. Ecol.* 13. 3829–3844.
- Bennett, G. F., Bishop, M. A. and Peirce, M. A., 1993. Checklist of the Avian Species of *Plasmodium* Marchifava & Celli, 1885 (Apicomplexa) and their Distribution by Avian Family and Wallacean Life Zones. *Systematic Parasitology* 26: 171-179.
- Benning, T. L., Lapointe, D. A., Atkinson, C. T dan Vitousek, P. M. 2002. Interactions of Climate Change With Land Use and Biological Invasions in the Hawaiian Islands: Modeling the Fate of Endemic Birds Using GIS. *Proceedings of the National Academy of Sciences USA* 99: 14246–14249.
- Bowman, D. 2003. *Georgis' Parasitology for Veterinarians: Eighth Edition*. Elsevier Science. St. Louis, MO.

- Brands, S.J. 2006. *The Taxonomicon*. Universal Taxonomic Services, Amsterdam, The Netherlands.
- Brotowidjojo, M.D. 1987. *Parasit dan Parasitisme*. Pt. Melton Putra Jakarta.
- Bub, S.D. 1991. *Bird Trapping dan Bird Banding: A Handbook for Trapping Methods All Over The World*. Cornell University Press, Ithaca, New York, USA.
- Bush, A. O., Lafferty, K. D., lotz, J.M., dan Shostak, W., 1997, Parasitology Meets Ecology on its Own Terms : Margolis et all. Revised. J. *Parasitology*., 83 (4) : 575-583
- Campbell, T. 1998. *Avian Hematology and Cytology*. Iowa State University Press, Ames Carey, Geoff and Olsson, U. 1995. Field Identification of Common, Wilson's, Pintail and Swinhoe's Snipes *Birding World* 8(5): 179-190.
- Cook, R. S. 1971. *Haemoproteus*. In Infectious and Parasitic Diseases of Wild Birds. J. W. Davis, R. C. Anderson, L. Karstad, D. O. Trainer (eds.). The Iowa State University Press, Ames, Iowa, p. 300–308.
- Darsie, R.F, Morris, C. D. 2003. *Keys to the Adult Females and Fourth Instar Larvae of the Mosquitoes of Florida (Diptera, Culicidae)*. Technical Bulletin of the Florida Mosquito Control Association. Florida Medical Entomology Laboratory, Institute of Food and Agricultural Sciences, University of Florida. Vero Beach, Florida.
- Davies, J., G. Claridge, dan C.H.E. Niranita. 1996. *Manfaat Lahan Basah Dalam Mendukung dan Memelihara Pembangunan*. Bogor: Direktorat Jendral PHPA & Asian Wetland Bureau.
- Ejiri H, Sato Y Sasaki E, Sumiyama D, Tsuda Y, Sawabe K, Matsui S, Horie S, Akatani K, Takagi M, Omori S, Murata K dan Yukawa M. 2008. Detection of Avian Plasmodium sp. DNA Sequences from Mosquitoes Captured in Minami Daito Island of Japan. *J Vet Med Sci* 70:1205-1210.
- Eldridge, B dan Edman, J. 2000. *Medical Entomology: A textbook on Public Health and Veterinary Problems Caused by Arthropods*. Kluwer Academic Publishers. Dordrecht - the Netherlands.
- Fachrul. 2006. *Populasi*. [http : // www. aceh forum.com./](http://www.acehforum.com/) 9 November 2009
- Floore, T. 2002. Mosquito Information. *The American Mosquito Control Association*, pherec famu. www.mosquito.org/mosquito.html/ 15 Desember 2009

- Friend, M dan Franson, J. 1999. *Field Manual of Wildlife Diseases : General Field Procedures and Diseases of Birds*. http://www.nwhc.usgs.gov/publications/field_manual/ 20 Oktober 2009.
- Godfrey, R. D., Fedynich A. M, dan Pence D. B. 1987. Quantification of Hematozoa in Blood Smears. *Journal of Wildlife Disease* 23: 558-565.
- Handari S. 1983. *Metode Pewarnaan*. Bhratara Karya Aksara-Jakarta.
- Ishtiaq, F, 2007. Prevalence and Diversity of Avian Hematozoan Parasites in Asia: a Regional Survey, *Journal of Wildlife Diseases*, 43(3), 2007, pp. 382-398.
- Jenning S., 2006. *Avian Malaria*. University of Georgia College of Veterinary Medicine, Athens, GA.
- Keymer A.E, dan Anderson R.M. 1979 The Dynamics of Infection of *Tribolium confusum* by *Hymenolepis diminuta*: the Influence of Infective-stage Density and Spatial Distribution. *Parasitology*, 79(1): 195–207.
- Kilpatrick, A. M., LaPointe, D. A. Atkinson, C.T., Woodworth, B. L., Lease, J. K dan Reither, M. E. 2006. Effects of Chronic Avian Malaria (*Plasmodium relictum*) Infection on Reproductive Success of Hawaii Amakihi (*Hemignathus virens*). *The Auk*. 123(3):764–774.
- Lapointe, D. A. 2000. Avian malaria in Hawai'i: *The Distribution, Ecology and Vector Potential of Forest-dwelling Mosquitoes*. PhD Dissertation, University of Hawaii, Manoa, Hawaii, 156 pp.
- MacKinnon, J. Philiphs, K dan Balen, B. V. 1992. *Panduan Lapangan Burung-burung di Sumatra, Jawa, Bali dan Kalimantan*. Puslitbang Biologi-LIPI. Bogor.
- Martinsen, E.S, Perkins S.L, Schall J.J. 2008. A Three-genome Phylogeny of Malaria Parasites (*Plasmodium* and closely related genera): Evolution of Life-History Traits and Host Switches. *Mol. Phyl. E.* 47(1); 261-273.
- Maruly, A. 2009. *Burung Berkik Ekor-lidi*. <http://www.fobi.web.id/v/aves/f-nec/nec-jug/burungberkikekorlidi.IT.jpg.htm/> 14Juli 2010.
- Maskoeri dan Jasin, 1998. *Sistematika Hewan*. Sinar Jaya. Surabaya
- McClure, H. E. 1974. *Migration and Survival of The Birds of Asia*. U. S. Army Component, SEATO Medical Research Lab, Bangkok. Thailand.

- Paperna I., Soh M.C.K, Yap C. A. M., Sodhi N. S., Lim S. L. H, Prawiradilaga D. M, dan Nagata H., 2005. Blood Parasite Prevalence and Abundance in The Bird Communities of Several Forested Locations in Southeast Asia. *The Ornithological Society of Japan Ornithol Sci* 4 : 129-138.
- Pendl. H, 2006. Morphological Changes in Red Blood Cells of Bird and Reptiles and Their Interpretation. *Isr. J. vet. Med.* Vol. 61.
- Rose. K, S. Newman, M. Uhart dan J. Lubroth. 2006. *Wild Bird HPAI Surveillance: Sample Collection From Healthy, Sick and Dead Birds*, by. FAO Animal Production and Health Manual, No 4. Rome.
- Rusbiantoro. D., 2008, *Global Warming for Beginner*, Pengantar Komprehensif tentang Pemanasan Global, Penerbit O2: Yogyakarta
- Rusila-Noor, Y., M. Khazali, dan I.N.N Suryadiputra. 1999. *Panduan Pengenalan Mangrove di Indonesia*. Bogor: PKA & Wetlands International-Indonesia Programme.
- Sibuea, T.Th, Y. Rusila-Noor, M.J. Silvius, dan A. Susmianto. 1995. *Burung Bangau, Pelatuk Besi dan Paruh Sendok di Indonesia. Panduan untuk Jaringan Kerja*. Jakarta: PHPA & Wetlands International-Indonesia Programme
- Soulsby, E.J.L 1982. *Helminths, Arthropods and Protozoa of Domesticated Animals*. 7th Ed. Bailliere Tindal London.
- Valkiunas, G. 2005. *Avian Malaria Parasites and Other Haemosporidia*. CRC Press, Boca Raton, Florida, 964 p.
- van Riper, S. G., van Goff, M. L., and Laird, M. 1986. The Epizootiology and Ecological Significance of Malarian in Hawaiian Land Birds. *Ecological Monographs* 56 (4): 327-344.
- Waldenstrom, J., S. Bensch, S. Kiboi, D. Hasselquist, dan U. Ottosson. 2002. Cross-Species Infection of Blood Parasites Between Resident and Migratory Songbirds in Africa. *Molecular Ecology* 11 : 1545-1554
- Yatim, W. 1987. *Biologi Modern*. Penerbit Tarsito Bandung.
- Yuda, P. 2009. High Prevalence Level of Avian Malaria in the Vulnerable of Java Sparrow. *Biota* 14 (3): 198-200.
- Yuda, P dan Aida, Y. 2009. Keragaman Jenis, Prevalensi dan Hubungan Evolusi Malaria Burung Pada Burung Liar dan Ayam. *Laporan Akhir Penelitian, Hibah Penelitian Prioritas Nasional. Fakultas Teknobiologi. UAJY. Yogyakarta.*